

<b>Notice of Allowability</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/637,842		NISHIHARA ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Paul Huber		2653	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to \_\_\_\_\_.
2. ☒ The allowed claim(s) is/are 33-40 (renumbered as claims 1-8, respectively).
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☒ Certified copies of the priority documents have been received in Application No. 09/943,327.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

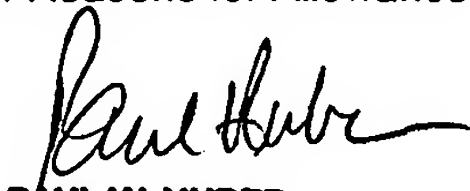
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |  |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                    |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                     | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|  | 9. <input type="checkbox"/> Other _____.   |

  
**PAUL W. HUBER**  
**PRIMARY EXAMINER**

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### EXAMINER'S AMENDMENT AND REASONS FOR ALLOWANCE

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

In the specification, page 1, between the Title and the Background of the Invention, the following paragraph was inserted:

-- This application is a continuation of U.S. Application Serial No. 09/943,327, filed August 29, 2001, now U.S. Patent No. 6,670,014. --

The following is an examiner's statement of reasons for allowance: the prior art of record considered as a whole fails to teach or suggest an information recording medium comprising a first information layer and a second information layer, wherein the first information layer comprises a first recording layer in which a reversible phase change is caused between phase and an amorphous phase by irradiation of a laser beam or Joule heat generated by application of current, the second information layer comprises a second recording layer in which a reversible phase change is caused between a crystalline phase and an amorphous phase by the irradiation of the laser beam or the Joule heat generated by the application of the current, the first recording layer is made of a first material, the second recording layer is made of a second material, the first material is different from the second material, in the first and second recording layers, a reversible phase change is caused by the irradiation of the laser beam, the first information layer is disposed closer to a side from which the laser beam is incident than the second information layer, and a melting point of the second material is lower than that of the first material; the information recording medium further comprising an optically separating layer disposed between the first information layer and the second information layer, wherein the first information layer further comprises a first substrate, a first lower protective layer, a first upper protective layer, and a first reflective layer, the second information layer further comprises a second lower protective layer, a second upper protective layer, a second reflective layer, and a second substrate, and the first substrate, the first lower protective layer, the first recording layer, the first upper protective layer, the first reflective layer, the optically separating layer, the second lower protective layer, the second recording layer, the second upper protective layer, the second reflective layer, and the second substrate are disposed in this order from the side from which the laser beam is incident; wherein:

**A) a thickness of the first substrate is in a range of 10 micrometers to 800 micrometers; or**

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**B) a thickness of the second substrate is in a range of 400 micrometers to 1300 micrometers; or**

**C) the information recording medium further comprises either:**

**1) a transparent layer disposed between the first substrate and the first lower protective layer; or**

**2) an interface layer disposed at at least one interface selected from the group consisting of an interface between the first lower protective layer and the first recording layer and an interface between the first upper protective layer and the first recording layer; or**

**3) an interface layer disposed at at least one interface selected from the group consisting of an interface between the second lower protective layer and the second recording layer and an interface between the second upper protective layer and the second recording layer; or**

**4) an interface layer disposed at at least one interface selected from the group consisting of an interface between the first upper protective layer and the first reflective layer and an interface between the second upper protective layer and the second reflective layer; or**

**5) a transmittance adjusting layer for adjusting a transmittance of the first information layer between the first reflective layer and the optically separating layer; or**

**6) a transmittance adjusting layer for adjusting a transmittance of the first information layer between the first reflective layer and the optically separating layer further comprising an interface layer disposed between the first reflective layer and the transmittance adjusting layer.**

(bold language emphasized)

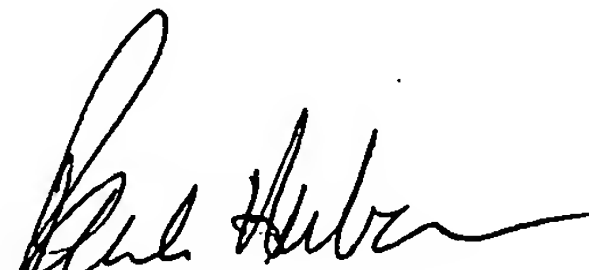
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Huber whose telephone number is 571-272-7588. The examiner can normally be reached on Compressed Schedule, every Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on 571-272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Paul Huber  
Primary Examiner  
Art Unit 2653

pwh  
September 28, 2005